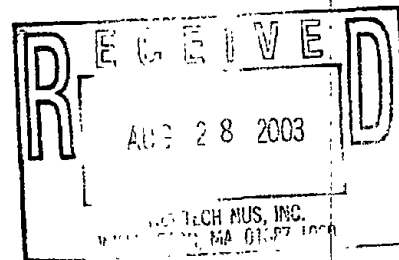


File: 5152-3.1 c: Parker



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

0375



August 27, 2003

Franco LaGreca
U.S. Department of the Navy
Naval Facilities Engineering Command
Northern Division
10 Industrial Highway
Code 1823, Mail Stop 82
Lester, PA 19113-2090

Re: Work Plan for Remedial Investigation Site 17, Building 32, Gould Island

Dear Mr. LaGreca:

EPA evaluated the *Work Plan for Remedial Investigation, Site 17, Building 32, Gould Island*, dated July 2003 in light of its incorporation of EPA's earlier comments. Detailed comments are provided in Attachment A.

EPA continues to believe that the sediment sampling plan presented is inadequate to support any screening for ecological risk purposes. Because of the historic use of many of the various discharge pipes, each pipe must be treated as a separate potential source. As such, each pipe should be evaluated using enough samples to justify a decision to either pursue additional data or abandon further evaluation. As the plan currently stands, one sample per discharge will not serve to characterize an area of sediment around the end of each discharge pipe, therefore EPA believes that additional sampling will be required regardless of the findings of Phase 1 sampling. The sampling plan presented in the RI is **highly** inefficient, and will not serve the stated goal of determining whether sediment contamination exists in the vicinity of each pipe.

EPA strongly recommends that transect sampling be performed projecting outward and toward the sides of the end of each outfall to determine whether contaminants are present, and whether the distribution of any contaminants exhibits any pattern near each outfall. Since the contamination is expected to consist largely of metals, cyanide, and PCBs, it may be possible to limit analyses of some of the additional samples to the most likely contaminants associated with each outfall as a cost-saving measure.

The Navy response to comments indicated that the Project Action Limits would be checked and revised. Changes to the tables were made, however, the tables presenting the Project Action Limits need additional scrutiny to ensure that all chemicals with published screening criteria have been adequately described. For example, Table 4-1A, both dichlorodifluoromethane and chloromethane have Region IX PRGs. However, neither chemical has a PRG listed in Table 4-1A. In order to ensure that the DQOs have been met, please review these tables and list the PRGs or other screening criteria when said criteria are available.

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As discussed in EPA's letters dated February 27, 2003 and May 13, 2003, and in the EPA Region 9 PRGs Table 2002 Update, industrial PRGs do not provide adequate evaluation of human health risk assessment for the recreational children when used alone for screening. EPA Region 9 residential PRGs **must** be used for screening purposes in this RI.

The Work Plan was not adequately revised to address an earlier comment. The use of background concentrations in the screening level human health risk assessment has been discussed in previous comments and responses to comments. The text of the Draft Final Work Plan indicates that chemicals eliminated based on background comparison will be discussed in the Uncertainties Section of the human health risk assessment. This discussion should include quantification of the risks to receptors exposed to chemicals eliminated based on background comparison. It is critical that you consider the total risk when evaluating the options for future use. This includes chemicals in soil that exceed background, as well as those that are within background concentrations and exceed risk-based screening concentrations.

As discussed herein, EPA believes that many of the comments raised in our letters dated February 27, 2003 and May 13, 2003, remain unresolved. In order to avert dispute resolution pursuant to Section XIII of the Federal Facilities Agreement, EPA recommends that the site RPMs meet to discuss ways to forward the investigations at Building 32 on Gould Island without further delay. I look forward to working with you and the Rhode Island Department of Environmental Management toward the investigation of Gould Island. Please do not hesitate to contact me at (617) 918-1385 to arrange such a meeting.

Sincerely,



Kimberlee Keckler, Remedial Project Manager
Federal Facilities Superfund Section

Attachment

cc: Paul Kulpa, RIDEM, Providence, RI
Kathy Marley, NETC, Newport, RI
Bart Hoskins, USEPA, Boston, MA
Chau Vu, USEPA, Boston, MA
David Peterson, USEPA, Boston, MA
Jennifer Stump, Gannett Fleming, Harrisburg, PA
Ken Finkelstein, NOAA, Boston, MA
Steven Parker, Tetra Tech-NUS, Wilmington, MA

ATTACHMENT A

<u>Page</u>	<u>Comment</u>
§3.2.1.6	<p>The text has been revised to reflect a change in the procedure for sampling open bedrock boreholes. Following EPA's recommendation in previous review comments, packered-off intervals are to be sampled for water-quality analysis. The sequence now proposed is to packer off each interval; perform a pressure/flow test; and, if the interval appears to be sufficiently transmissive, collect a water sample by the low-flow method. While this sequence will (sensibly) first identify intervals that appear to be good candidates for sampling, the procedure introduces clean water to the formation in potentially large quantities before sampling for chemical analysis. This could compromise the analytical results, and introduce significant uncertainty in the interpretation of water-quality data. The low-flow sampling should be attempted first in each packered-off interval, followed by the pressure/flow test. The response to the purge (e.g., stable water level and stable field parameters, failure to recharge, etc.) may be a sufficient indicator of whether the water samples are worth sending to the lab for analysis. The packer-test results, obtained after collection of the water samples, may also influence whether to have the water from a particular interval analyzed. Further discussion should be held on the best sequence of hydraulic testing and water sampling.</p> <p>The proposed procedure introduces clean water to the formation in potentially large quantities before sampling for chemical analysis. This could compromise the analytical results, and introduce significant uncertainty in the interpretation of water quality data.</p>
§3.2.2.1	<p>Contrary to a previous EPA comment, no additional sediment samples have been added to the plan. However, collection of mussels has been added. EPA considers eleven samples of sediment and eleven mussel samples to be a minimal level of effort. It is likely that additional samples will be necessary.</p>
Tables 3-1 B&C	<p>The Sample Location Identifiers have been revised between the draft and the draft final of the document. A "3" has been added to each of the sample identifiers. For example, SD01 is now SD301. The Sample Numbers are defined in Section 4.4 of the Work Plan: "Site Identifier-Medium and Sample Location-Depth or date." The addition of the "3" is not consistent with the text in Section 4.4.</p>
Figure 3-1	<p>The figure has been revised to show the addition of a well cluster on the east side of the building, approximately one third of the building's full length from the north end. This represents a solid response to EPA's concern for minimal control on groundwater quality in areas potentially downgradient of the plating and</p>

solvent areas of the building. The overburden/bedrock well pair is well motivated. The optimal location for this well pair is obviously a matter of judgment and, inevitably, conjecture, as one does not know in advance either historical contaminant release points or the local groundwater flow directions (particularly in the bedrock). The recommended location is reasonably well motivated, as there is a stretch of about 400 feet along the east side of the building to the north of proposed well MW303B, and a location approximately in the center of this stretch has some probability of detecting contamination originating upgradient beneath the building footprint. A location somewhat farther south (e.g., about 100 to 150 feet closer to MW303B) might be closer to flow paths tracing back to the plating and solvent areas, based on the description of NNE flow inferred near the south end of the building (*see* App. A, page 2-9, §2.5.2). Further thought should be given to the final location for the new well pair. A location farther south than that shown on Figure 3-1 may be more likely to intercept pathways passing through the plating and solvent areas. EPA recognizes, however, that it leaves a larger stretch of the east side of the building unexplored. Additional sampling may be required.

Tables 2-1 through 2-4 For the third tier conceptual site model, exposure pathways (e.g., ingestion, inhalation, dermal contact) and receptors (e.g., human and ecological receptors) need to be included.

Tables 4-1A through 4-3D For the project action limits, EPA Region 9 residential PRGs or ecological risk-based criteria, whichever is the lower of the two, should be used for the PAL, not the industrial PRGs.

Table 5-1 Table 5-1, presenting the human health risk screening criteria, is not correct. The text of Section 5.2 indicates that the Preliminary Remediation Goals for noncarcinogens will be adjusted to reflect a hazard quotient of 0.1. This adjustment has not been reflected in the values presented in Table 5-1. Additionally, the use of *industrial* PRGs has **not** been approved by EPA. To adequately select Contaminants of Potential Concern, the *residential* PRGs should be used as the basis for the human health risk assessment screening.

In disagreement with an earlier EPA comment, the Navy indicated in its response to Specific Comment 28, that EPA Region 9 industrial PRGs will be used for screening purposes. According to the EPA Region 9 PRGs Table 2002 Update (Smucker, <http://www.epa.gov/region09/waste/sfund/prg/files/02userguide.pdf>) "it is recommended that industrial PRGs **not** be used for screening sites **unless** they are used in conjunction with residential values." Industrial PRGs are developed based on an adult receptor, potential receptors proposed for evaluation in this human health risk assessment include recreational children. The appropriate screening tool for use in this case is the residential PRG. In order to

be appropriately conservative and protective of the potential future receptors, screen contaminants of concern using Region 9 residential PRGs. In addition, PRGs for noncarcinogenic contaminants of concern must be adjusted to reflect a hazard index of 0.1.

Table 5-2 EPA was unable to verify the surface area presented for the adolescent trespasser. Please present the body parts exposed for the adolescent trespasser.

Please check the inhalation rates presented for the child recreational user. As presented, it looks as though the soil ingestion rate may have been mistakenly presented as the inhalation rate for this receptor.

Please present the calculations for the PEF derived for the construction worker's inhalation pathway. The value listed in Table 5-2 appears extremely low when compared to the PEF calculated for the other receptors and as compared to the default PEF presented in the EPA guidance document cited.

Table 5-3 In the selection of the ingestion rate for shellfish, it appears that the EPA document "Guidance for Assessing Chemical Contaminant Data for Use in Fish Advisories" (EPA 823-B-00-007, August 2000) was not consulted. The ingestion rate presented in Table 5-3 is approximately 30% lower than the ingestion rate recommended in the EPA guidance document. Please correct.

Table 5-5 The soil benchmarks for the protection of soil invertebrates and plants accurately reflect those in Efroymson (1997a and 1997b). It should be noted on the table, however, that the presented invertebrate values are those for the earthworm, not for microbial processes.

The soil screening benchmark for benzo(a)pyrene (700 ug/kg) is not consistent with the value provided in the Canadian Environmental Quality Guidelines Update 2002 table (Available at http://www.ccme.ca/assets/pdf/e1_06.pdf). Please revise the PAH values to be consistent with the most recent screening values.

The sediment benchmarks for the high molecular weight and low molecular weight PAHs are reversed. The benchmark for low MW PAHs should be 552 ug/kg and that for high MW PAHs should be 1700 ug/kg.

p. 5-14, §5.3 Insectivorous birds and mammals and piscivorous birds and mammals should not be listed under carnivorous birds and mammals, they should be listed separately.

p. 5-14, §5.3 A robin should be considered as the representative insectivorous/vermivorous bird instead of the woodcock since it is probably more likely to forage on Gould island

and may yield more realistic values for soil ingestion. EPA recognizes that the work plan language allows for adjustment of representative receptors after the habitat characterization.